



**ENGINEERING OPERATIONS COMMITTEE
MEETING MINUTES
DECEMBER 5, 2002 - 9:00 A.M.
EXECUTIVE CONFERENCE ROOM**

Present: L. E. Tibbits J. Friend T. Anderson
C. Roberts J. D. Culp T. Davies
J. W. Reincke T. Fudaly W. Stebbins (M. VanPortFleet)

Guests: B. Lower K. Kennedy

OLD BUSINESS

1. Approval of the Minutes of the November 6, 2002, Meeting - L. E. Tibbits

Minutes of the November 6, 2002, meeting were approved.

NEW BUSINESS

1. Certification of Contractor's Employees Installing New Guardrail Endings (Details 1, 2, and 3) - B. Lower

New guardrail endings must be installed properly and should be installed by trained, certified personnel. At this time, contractors may or may not use certified personnel. The department should consider changing its policy and require the development of a certification requirement for all installers.

ACTION: The item was tabled. Bard will do some more investigation into this risk management issue and will report back to EOC. The Barrier Advisory Committee will look at a warranty/certification program, including one previously developed by the Traffic and Safety Support Area (Vic Childers).

2. Discontinued Use of Breakaway Cable Terminals - B. Lower

A recommendation was made to phase out the repair of Breakaway Cable Terminal (BCT) guardrail endings. Several years ago, the BCT was tested under NCHRP 350 and failed. Since then the department has discontinued new installations, but still allows existing BCTs to be repaired if the damage is confined to only the first panel. The Barrier Advisory Committee supports the recommendation.

ACTION: The recommendation is approved. After September 30, 2004, BCT endings will no longer be repaired. Damaged endings will be replaced according to current standards.

3. Pavement Selections - K. Kennedy

A. I-94 Reconstruction, CS 39022/39024, JN 54230

Tabled.

B. I-96 Reconstruction, CS 82122, JN 45705/Concrete Pavement Selection

The reconstruction alternates considered were a hot mix asphalt (HMA) pavement (Alternate 1 - Equivalent Uniform Annual Cost [EUAC] \$311,917/directional mile) and a jointed plain concrete pavement (JPCP) using a P1 modified concrete mix (Alternate 2 - EUAC \$258,006/directional mile).

A life cycle cost analysis was performed and Alternate 2 was approved based on having the lowest EUAC. The pavement design and cost analysis are as follows:

Alternate 2A (14.2 Percent of the Project) Reconstruct: Jointed Plain Concrete Pavement (4 Lanes)

11"	.....	Jointed Plain Concrete Pavement (15' joint spacing)
9"	.....	Jointed Plain Concrete Pavement (15' joint spacing) (Inside Shoulder)
16"	.....	Open Graded Drainage Course (18" Inside Shoulder)
		Geotextile Separator
6"	.....	Modified Open Graded Underdrains
27"	.....	Total Thickness

Alternate 2B (10.5 Percent of the Project) Reconstruct: Jointed Plain Concrete (5 Lanes)

11"	.....	Jointed Plain Concrete Pavement (15' joint spacing)
9"	.....	Jointed Plain Concrete Pavement (15' joint spacing) (Inside Shoulder)
16"	.....	Open Graded Drainage Course (18" Inside Shoulder)
		Geotextile Separator
6"	.....	Modified Open Graded Underdrains
27"	.....	Total Thickness

Alternate 2C (75.3 Percent of the Project) Reconstruct: Jointed Plain Concrete (2 Local Access Lanes, 3 Express Lanes)

11"	.....	Jointed Plain Concrete Pavement (15' joint spacing)
9"	.....	Jointed Plain Concrete Pavement (15' joint spacing)
		(Inside Shoulder of Express and Local Access Lanes)

16"	Open Graded Drainage Course (18" Inside Shoulder of Express and Local Access Lanes) Geotextile Separator
6"	Modified Open Graded Underdrains
27"	Total Thickness
Present Value Initial Construction Costs	\$1,893,571/directional mile
Present Value Initial User Costs	\$2,111,681/directional mile
Present Value Maintenance Costs	\$163,701/directional mile

4. **Creation of Department Attenuator Policy - B. Lower**

The FHWA requested the department to develop an attenuator policy allowing competitive bidding. The Barrier Advisory Committee has prepared a draft attenuator program that includes the basis and the special provisions to support such a policy. The Traffic Recommendations Committee reviewed and made recommendations to the proposed program, which were included in the draft.

ACTION: The concept for an attenuator policy is approved subject to more development. Bard will work with region liaisons, FHWA and the Barrier Advisory Committee to possibly adapt the concept into a warranty certification program and to develop a performance evaluation plan.

(Signed Copy on File at C&T)
 Jon W. Reincke, Secretary
 Engineering Operations Committee

JWR:kar

cc:	EOC Members	C. Libiran	T. L. Nelson	R. J. Risser, Jr. (MCPA)
	Region Engineers	M. Frierson	D. A. Juntunen	A. C. Milo (MRBA)
	G. J. Rosine	L. Stornant	J. Steele (FHWA)	J. Becsey (MAPA)
	R. J. Lippert, Jr.	K. Rothwell	J. Murner (MRPA)	D. Hollingsworth (MCA)
	J. Ruszkowski	T. Phillips	M. Nystrom (AUC)	M. Newman (MAA)
	R. D. Till	K. Peters		